

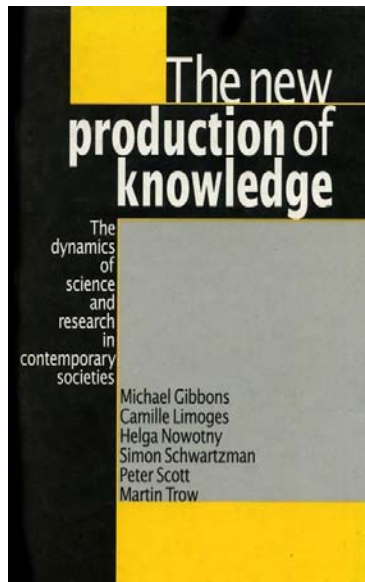


Re-thinking new knowledge production *12 ½ years of Mode 2*

Laurens Hessels and Harro van Lente

Science Impact, Vienna, 10 May 2007

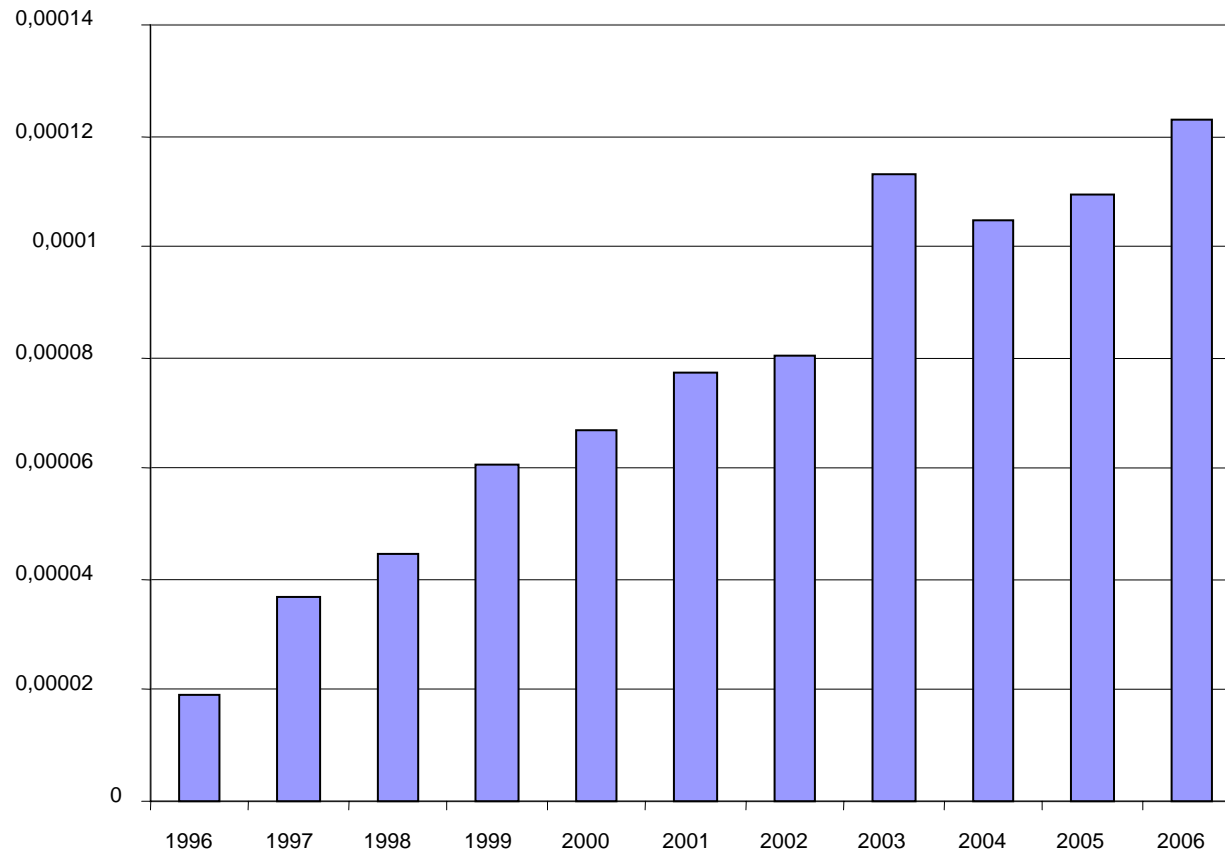
Mode 2 knowledge production



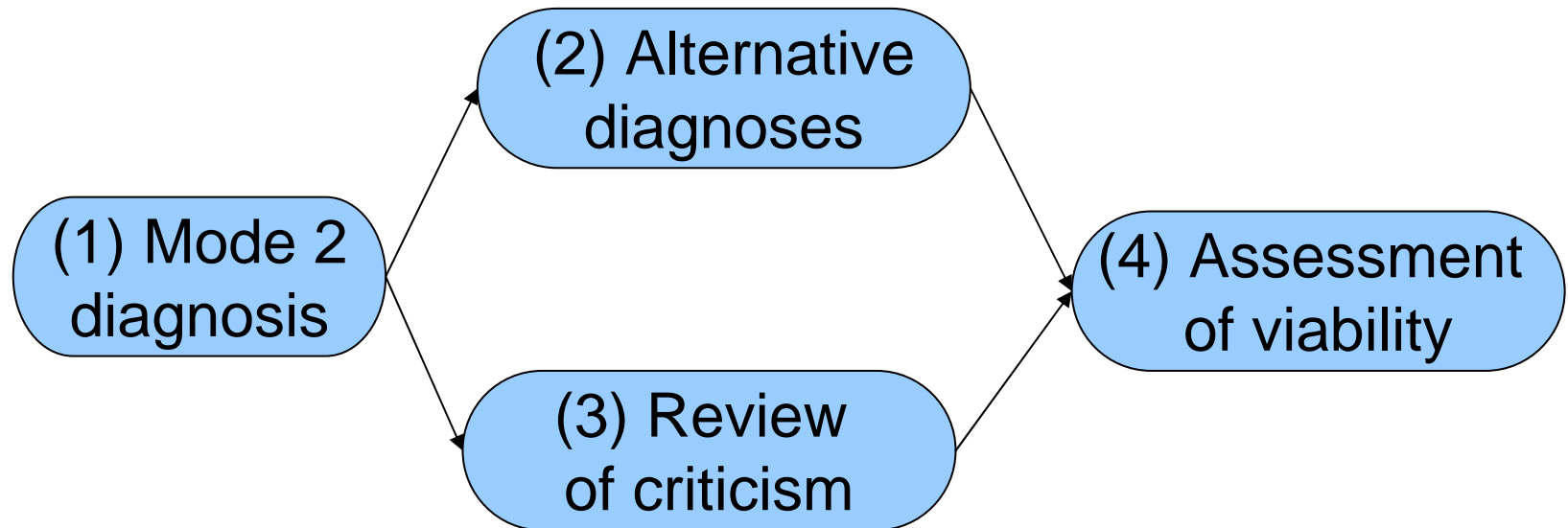
- *Context of application*
- *Transdisciplinarity*
- *Heterogeneity*
- *Reflexivity / social accountability*
- *Novel quality control*

- >1000 scientific citations
- Influence in policy in science, technology and innovation
 - **Still a viable concept?**

The rise of Mode 2



Outline



Alternative diagnoses

- *Strategic research*
 - *Post-normal science*
 - *Triple Helix*
 - *The entreprise university*
 - *Academic capitalism*
 - *Finalization science*
 - *Post-academic science*
 - *Innovation systems*
-
- Address changes on cognitive, organizational and/or societal level
 - Wide scope of NPK is exceptional

Mode 2 is most famous

Concept	(main) publication	Citations
Mode 2	Gibbons et al. (1994)	1067
Academic capitalism	Slaughter and Leslie (1997)	315
Innovation systems	Edquist (1997)	298
Post-normal science	Funtowicz and Ravetz (1993)	204
Triple Helix	Etzkowitz and Leydesdorff, 2000	175
Enterprise university	Marginson and Considine, 2000	106
Post-academic science	Ziman, 2000	97
Strategic research	Irvine and Martin, 1984	58
Finalization science	Böhme et al., 1983	22

Review of criticism

**Empirical
validity**

Lack of empirical evidence

**Conceptual
strength**

**Normative
implications**

Several attributes are contested

	Weak	Disputed	Strong
Context of application	[Blue bar]		
Transdisciplinarity	[Blue bar]	[White bar]	
Heterogeneity	[Blue bar]		
Reflexivity	[Blue bar]	[White bar]	
Quality control	[Blue bar]		[White bar]

Review of criticism

Empirical validity

Lack of empirical evidence
Incorrect historical perspective
Exaggerated claims

Conceptual strength

Weak coherence
Lack of theoretical underpinning

Normative implications

Mode 2 is better?

Conclusion

- **Successful manifest**
 - Identifies trends that deserve consideration
- **Empirical validity partly doubtful**
 - Further research is desired
- **Oversimplified conceptualization**
 - Mode 1 and 2 are extremes
 - Time to disconnect the Mode 2 attributes!